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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/692,263	10/23/2003	Paul D. Bliley	100111538-1	1563
22879	7590	08/10/2005	EXAMINER	
HEWLETT PACKARD COMPANY P O BOX 272400, 3404 E. HARMONY ROAD INTELLECTUAL PROPERTY ADMINISTRATION FORT COLLINS, CO 80527-2400			MCLOUD, RENATA D	
			ART UNIT	PAPER NUMBER
			2837	

DATE MAILED: 08/10/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/692,263	BLILEY ET AL.	
	Examiner	Art Unit	
	Renata McCloud	2837	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 10 May 2005.

2a) This action is FINAL. 2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 1 and 3-34 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) Claim(s) _____ is/are allowed.

6) Claim(s) 1 and 3-34 is/are rejected.

7) Claim(s) _____ is/are objected to.

8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) All b) Some * c) None of:

- Certified copies of the priority documents have been received.
- Certified copies of the priority documents have been received in Application No. _____.
- Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413)
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	Paper No(s)/Mail Date. _____.
3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>05/10/2005</u> .	5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)
	6) <input type="checkbox"/> Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 3-7, 17-22, 29, 30 are rejected under 35 U.S.C. 102(b) as being anticipated by Hella (DE4440064).

Claim 1: a high switch (Fig. 2:T1) connected to a power source (+); a low switch (T2) connected to ground (-); a first configuration of the high and low switch connected together (T1 connected to T2 at X) to drive the motor (Fig. 1:M); a second configuration in which the high and low switch are discrete where the high switch is coupled as a first component switch to a component (T1 coupled at pin1) and the low switch is coupled to a different component (T2 coupled at pin 2).

Claim 3: a second high switch (T3), a second low switch (T4), wherein the first configuration includes the second high switch and the second low switch coupled (at Y) to drive the motor (Fig. 1:M).

Claims 4, 17, 21, 29: a first H-bridge including a fist configuration as a first motor drive (Fig. 1: B1) and a second configuration as discrete switches to be coupled to different components (Fig. 1:B2); and a register to maintain an indicator of the first H-bridge as at least one of the first motor circuit or as the discrete switch (Abstract).

Claims 5,18,22: the register maintains the indicator that the configurable first H-bridge is configured as the discrete switches (Abstract; Fig. 1)

Claims 6, 19: the register maintains a switch indicator that indicates a configuration of a discrete switch (abstract; Fig. 1)

Claims 7, 20, 30: a high switch (Fig. 2:T1) connected to a power source (+); a low switch (T2) connected to ground (-); a first configuration of the high and low switch connected together (T1 connected to T2 at X) to drive the motor (Fig. 1:M).

3. Claims 1 and 3 are rejected under 35 U.S.C. 102(b) as being anticipated by Hella (EP0833437).

Claim 1: a high switch (24) connected to a power source (18); a low switch (26) connected to ground (22); a first configuration of the high and low switch connected together to drive the motor (50); a second configuration in which the high and low switch are discrete where the high switch (24) is coupled as a first component switch to a component (52) and the low switch (26) is coupled to a different component (54)

Claim 3: a second high switch (24), a second low switch (26), wherein the first configuration includes the second high switch and the second low switch coupled (at 34) to drive the motor (M).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 8, 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hella 064 in view of Hella (EP0833437)

Claim 8: Hella 064 teaches the limitations of claim 4. Referring to claim 8 its unclear if they disclose a second motor being driven by an H-bridge. Hella 437 teaches a second H-bridge (24,26) to drive a second motor (50). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the apparatus taught by Hella to use a second H-bridge as taught by Hella in order to drive a motor.

Claim 9: Hella teaches the limitations of claim 4. Referring to claim 8 its unclear if they disclose a second motor being driven by an H-bridge. Hella 437 teaches a second H-bridge circuit (24,26) configured as a second motor drive circuit; a third H-bridge circuit (24,26) implemented as a third motor drive circuit; and wherein the second H-bridge circuit is configured to drive the first motor (the second h-bridge is made up of the 4th-6th switches of 24/26), and the third H-bridge circuit is configured to drive a second motor in an event that the configurable first H-bridge circuit is configured as the discrete switches (the third h-bridge is mage of 5th-8th switches, the 5th and 6th of which drive the second motor).

6. Claims 10, 14,15,23-25, and 31-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Barrus et al (US 6082914) in view of Hella 437.

Claims 10,23,31: Barrus et al teach a printing device, comprising: a first motor (Fig. 4: 230) configured for movable control of at least a first component in the printing device; a second motor (Fig. 4: 220) configured for movable control of at least a second component in the printing device; a multiple H-bridge circuit including: a first H-bridge circuit (274) configured to drive the first motor (230); a second H-bridge circuit (296) configured to drive the second motor (220); and a third H-bridge circuit (304) that includes a first configuration as a motor drive circuit to drive a third motor (186). They do not teach the driver includes a second configuration as discrete switches that can each be coupled as a component switch. Hella '437 teach a first motor (M), a second motor (M); a first H-bridge driving the first motor (24,26); a second h-bridge (24,26) driving the second motor; and a third h-bridge (24,26) having a first configuration driving a motor (M) and second configuration as discrete switches driving different components (52,54). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the apparatus taught by Barrus to use the H-bridge of Hella in order to drive the motors.

Claim 14: Barrus et al and Hella '437 teach the limitations of claim 10. Referring to claim 14, Hella teaches the third H-bridge circuit includes a high switch (24) connected to a voltage source (18) and includes a low switch (26) connected to ground,

(22) and wherein the first configuration includes the high switch and the low switch connected together and coupled to drive the third motor (50).

Claim 15: Barrus et al and Hella '437 teach the limitations of claim 10. Referring to claim 15, Hella teaches the third H-bridge circuit includes a high switch (24) connected to a voltage source (18) and includes a switch (26) connected to ground (22), and wherein the second configuration includes at least one of the high switch and the low switch coupled as the component switch (coupled to 52 and 54).

Claims 24,33: Barrus et al and Hella '437 teach the limitations of claims 25,31. Referring to claims 24,33, Hella teaches coupling the third H-bridge to drive a third motor (M).

Claims 25, 34: Barrus et al and Hella '437 teach the limitations of claims 23,31. Referring to claims 25,34, Hella teaches coupling the switch of the third H-bridge to a component in the second configuration (24, 26 coupled to 52,54)

Claim 32: Barrus et al and Hella '437 teach the limitations of claim 31. Referring to claim 32, Hella teaches the second H-bridge circuit is configured to drive the first motor (the second h-bridge is made up of the 4th-6th switches of 24/26), and the third H-bridge circuit is configured to drive a second motor in an event that the configurable first H-bridge circuit is configured as the discrete switches (the third h-bridge is mage of 5th-8th switches, the 5th and 6th of which drives the second motor).

7. Claims 11-13,16,26-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Barrus et al (US 6082914) and Hella 437 as applied to the claims 10,23 above, further in view of Hella 064

Claims 11, 26: Barrus et al and Hella '437 teach the limitations of claims 10,23.

Referring to claims 11,26, it is unclear if they teach a configuration register configured to maintain an indicator of the H-bridge circuit configuration. Hella '064 teaches a configuration register configured to maintain an indicator of the H-bridge circuit configuration (abstract).

Claim 12: Barrus et al and Hella '437 teach the limitations of claim 10. Referring to claim 12, it is unclear if they teach a configuration register configured to maintain an indicator of the H-bridge circuit configured as discrete switches. Hella '064 teaches a configuration register configured to maintain an indicator of the H-bridge circuit configuration (abstract).

Claim 13: Barrus et al and Hella '437 teach the limitations of claim 10. Referring to claim 13, its is unclear if they teach a configuration register configured to maintain an indicator that an H-bridge circuit is configured as the discrete switches, the configuration register further configured to maintain a switch indicator that indicates a configuration of a discrete switch. Hella '064 teaches a configuration register configured to maintain an indicator that an H-bridge circuit is configured as the discrete switches, the configuration register further configured to maintain a switch indicator that indicates a configuration of a discrete switch (abstract).

Claim 16: Barrus et al and Hella '437 teach the limitations of claim 10 and referring to claim 16 Hella '437 teaches the H-bridge is in an ASIC. It is unclear if they teach a register. Hella '064 teaches an ASIC (fig. 1:IB) and a register (abstract).

Claim 27: Barrus et al and Hella '437 teach the limitations of claim 23 and referring to claim 27, Hella '437 teaches coupling the third H-bridge to drive a third motor (M). It is unclear if they teach a configuration register to indicate a configuration of the third H-bridge circuit. Hella '064 teaches a configuration register to indicate a configuration of a third H-bridge circuit.

Claim 28: Barrus et al and Hella '437 teach the limitations of claim 23 and referring to claim 28 Hella '437 teaches coupling the third H-bridge to drive a component (52,54). It is unclear if they teach a configuration register to indicate a configuration of the third H-bridge circuit. Hella '064 teaches a configuration register to indicate a configuration of a third H-bridge circuit.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the apparatus taught by Barrus et al and Hella '437 to use a configuration register as taught by Hella '064, in order to control which H-bridge drives a certain one of a plurality of motors.

Response to Arguments

8. Applicant's arguments with respect to claims 1,3-34 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Applicant's submission of an information disclosure statement under 37 CFR 1.97(c) with the fee set forth in 37 CFR 1.17(p) on 10 May 2005 prompted the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 609(B)(2)(i). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Renata McCloud whose telephone number is (571) 272-2069. The examiner can normally be reached on Mon.- Fri. from 8 am - 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Martin can be reached on (571) 272-2800 ext. 4. The fax phone

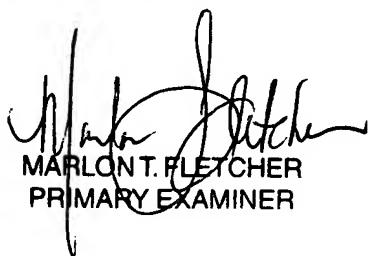
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number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Renata McCloud
Examiner
Art Unit 2837

RDM



MARLON T. FLETCHER
PRIMARY EXAMINER